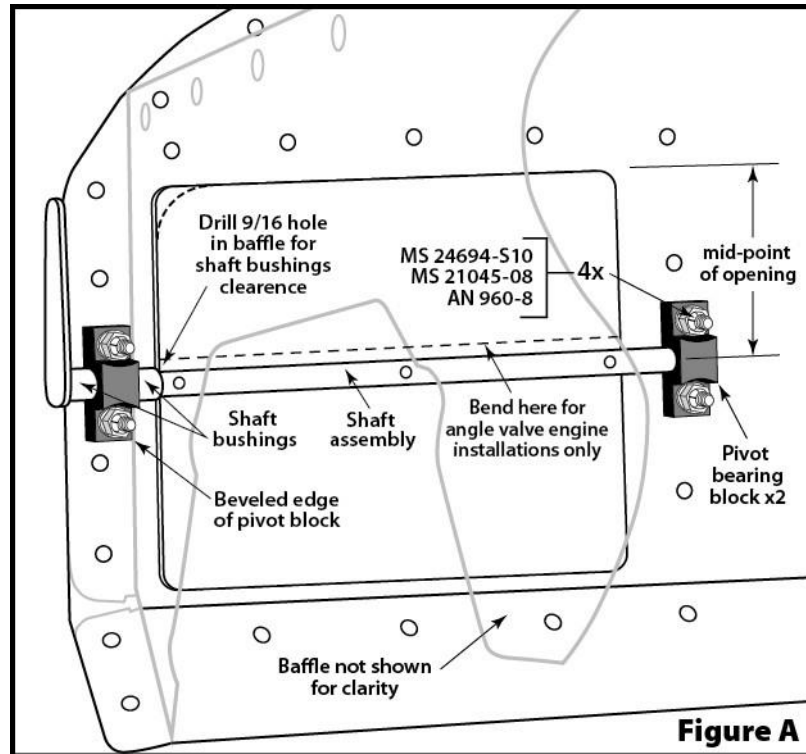


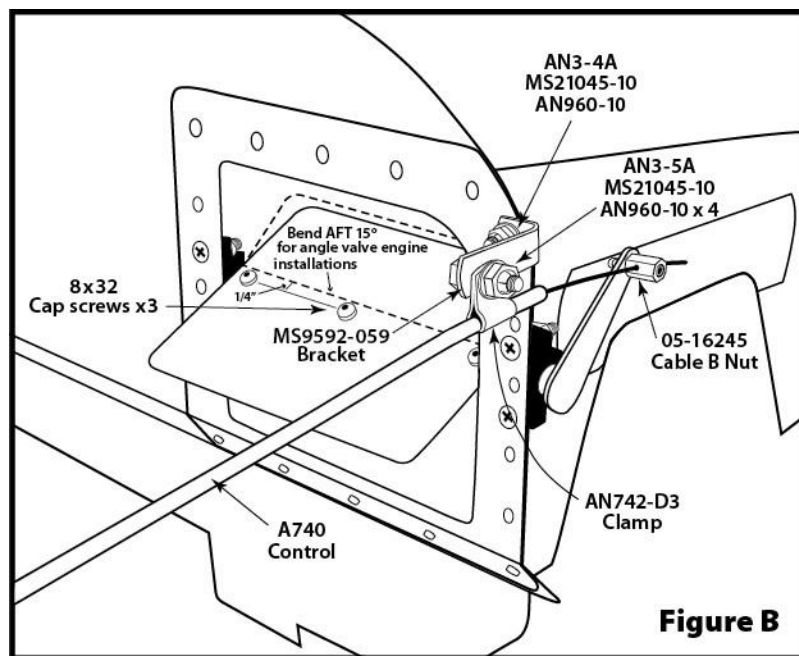
OIL COOLER CONTROL VALVE INSTALLATION INSTRUCTIONS



These instructions will guide you through the installation of the oil cooler air control valve. Installation of the valve can be retrofitted to existing or along with the installation of the Oil Cooler Mount. When installing the valve assembly on an existing OCM you will need to remove the air plenum for access (you might find it easier to remove the plenum and cooler as a unit).

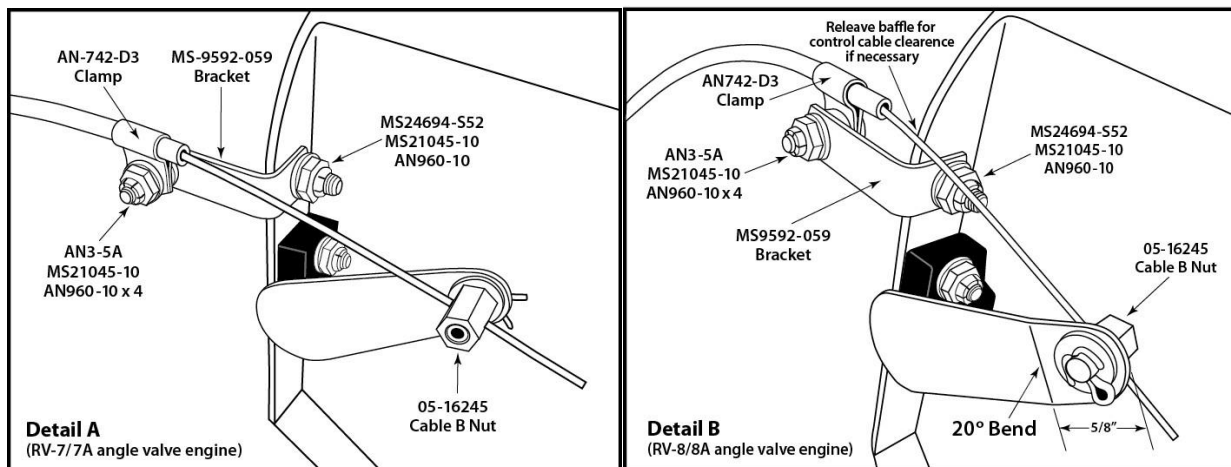
(REV A 2/20)

Find the mid-point of the baffle cooler opening for location of the pivot bearing blocks. The pivot blocks are designed with a relief in the base to allow placement over an existing rivet if needed. Clamp outboard pivot block in location with beveled edge against baffle flange, drill with a # 19 bit using the attachment holes in the block as a guide. Remove block and countersink aft side of baffle to accept the MS24694-S10 screws. Temporarily install the block using hardware shown in figure A. Use the pivot block as a guide to drill a 3/8" hole in the adjacent baffle, remove block and enlarge the hole to 9/16". Reinstall pivot block and insert shaft assembly, slide inboard pivot block onto shaft and clamp at the mid-point of the baffle opening, refer to figure A. Drill through upper attachment hole of inboard pivot block then remove. Attach block on the aft side of baffle, use the shaft assembly to align pivot block horizontally then drill lower attach hole using the block as a guide. Remove pivot block and counter sink the aft side of baffle for attachment screws, install block with hardware shown in figure A. Installations on angle valve engines require the door to be bent 15 degrees aft a 1/4" above door centerline, refer to figure B. Installations on angle valve engine RV-8/8A's require the shaft arm to be bent 20 degrees inboard 5/8" below top edge for cowling clearance, refer to detail B.



Slide shaft assembly into pivot blocks and attach the door with 8X32 cap screws, pivot door from open to closed and adjust alignment as needed to not catch on baffle opening. The shaft arm should clear the out-board edge of baffle and allow full movement of door, trim door width if necessary. When the door is closed it should contact the upper outboard baffle opening radius as shown in figure A. Measure and record the distance from the inboard side of the shaft arm to the pivot block call this measurement 1, remove door/shaft assembly and reassemble them on the bench. Measure and record the distance from the inboard side of the shaft arm to the door, call this measurement 2.

Using the supplied ½"X.0375 ID tubing cut the first bushing to the length of measurement 1, cut the second bushing to the length of measurement 2 subtracting the length of measurement 1 and the width of the pivot block (5/8"), refer to figure A. *Note it is critical for correct bushing lengths to allow the door to pivot but not move side to side catching on baffle opening.* Reinstall shaft/door assembly on the baffle using thread lock on cap screws. Install the cockpit control cable and route as necessary to the shaft arm shown in figure B. Slide the AN742-03 clamp over the control cable and attach it to the MS9592-059 bracket with hardware shown. On parallel valve engine installations position the bracket on the aft side of baffle so control cable is in-line with the shaft arm attach point when the door is in the closed position, drill a 3/16" hole in the baffle using the bracket as a guide. Angle valve engine installations position the MS9592-059 bracket on the forward side of baffle flange drill a 3/16" hole then countersink on the aft side of baffle for MS24694-S52 screw, refer to detail A&B.



Install the oil cooler and plenum to the OCM, angle valve engine installations don't tighten attach hardware until the MS9592-059 bracket has been installed. Use AN 960-10 washers between the AN742-03 clamp and bracket for alignment of the control cable when inserted through cable b nut and shaft arm. *Note angle valve engine installation pay close attention to detail A (RV-7/7A) and detail B (RV-8/8A) for correct orientation of control cable attachment.* Cut control cable housing length so the cable B nut will not make contact when door is in the closed position. **Make sure to pull the control cable knob out sufficiently when cutting housing to ensure the control wire will not to get cut short.** Push the control knob in then position the door all the way open and tighten cable b nut. Cut excess control wire off leaving approximately a 3/4" tail and safety wire control cable to the AN742 clamp to prevent unintentional movement. Make sure all OCV hardware, oil hoses and oil cooler mount hardware is torqued, test door operation prior to and after re-cowling engine. *RV-8/8A angle valve engine installations make sure control arm to cowling clearances are adequate for engine movement while operating.* Placard cockpit control operation and update POH prior to first flight.

OCV-01 Packing list

- 1 - OCV-1SA Shaft/Arm assembly
- 2 - OCV-1B Pivot bearing block
- 1 - OCV-1D Door
- 1 - ½"X .035 bushing stock
- 1 - MS-9592-059 Bracket
- 1 - AN-742-D3 Clamp
- 4 - MS24694-S10 Screws
- 4 - MS 21045-08 Nuts
- 4 - AN960-08 Washers
- 1 - AN3-4A Bolt
- 1 - AN3-5A Bolt
- 2 - MS 21045-10 Nuts
- 5 - AN960-10 Washers
- 1 - MS24694-S52 Screw
- 3 - 8X32 SS Cap screw

OCV-01 Kit includes the additional parts below

- 1 – A-740 72" Control cable
- 1 – 05-16245 Cable B Nut